

|                               |                        |                     |  |
|-------------------------------|------------------------|---------------------|--|
| <b>Notice of Allowability</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                               | 09/936,367             | AFFOLTER ET AL.     |  |
|                               | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                               | Chih-Min Kam           | 1656                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/29/07.
2. ☒ The allowed claim(s) is/are 7 and 14-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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## DETAILED ACTION

### *Status of the Claims*

1. Claims 1-7 and 9-18 are pending.

Applicants' amendments filed October 29, 2007 is acknowledged. Applicants' response has been fully considered. Claims 7 and 18 have been amended. Claims 1-6 and 9-13 are non-elected inventions and withdrawn from consideration. Therefore, claims 7 and 14-18 are examined.

### **Withdrawn Claim Rejections - 35 USC § 112**

2. The previous rejection of claims 7, 14 and 16-18 under 35 U.S.C. 112, first paragraph, written description, is withdrawn in view of applicants' amendment to the claim, and applicants' response at pages 5-6 in the amendment filed October 29, 2007; as well as Examiner's Amendment (see below).
3. The previous rejection of claims 7 and 14-18 under 35 U.S.C. 112, second paragraph, is withdrawn in view of applicants' amendment to the claim, and applicants' response at pages 5-6 in the amendment filed October 29, 2007.

### ***Examiner's Amendment***

An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Barrett on January 18, 2008.

**Examiner's Amendments to the Specification:**

-Please add the following paragraph after the title at page 1 of the specification:

This application is a 371 of PCT/EP00/01796, filed March 2, 2000, which claims the foreign priority of EPO 99104923.0, filed March 11, 1999.

-Please replace the amended paragraph at page 2 of the amendment filed 8/2/8/2006 (originally cited as fourth paragraph at page 11 of the specification), with the following rewritten paragraph:

The *A. oryzae creA* gene was subcloned from a Gem12 clone as a 7.3 KB BamHI fragment. By Southern analysis, the coding region was localised on a 4.3 KB PstI-SphI fragment that was subcloned in pUC19 generating pNFF212 and completely sequenced. The nucleotide sequence (SEQ ID NO:1) and deduced amino acid sequence (SEQ ID NO:2) of the *A. oryzae creA* gene is given below. Sequence motifs in the putative promoter region that fit the SYGRGG (SEQ ID NO 5) consensus of CREA DNA-binding sites (Kulmburg et al., 1993) are singly underlined and marked in bold. The region encompassing the DNA-binding C<sub>2</sub>H<sub>2</sub> Zn finger region in the CREA protein (Dowzer et al., 1989) is doubly underlined and in bold.

**Examiner's Amendments to the Claims:**

Cancel claims 1-6 and 9-13.

Claims 7 and 18 have been amended as follows:

7. (Currently amended) A method for enhancing the proteolytic activity of a koji mold belonging to the genus *Aspergillus*, *Rhizopus*, *Mucor*, or *Penicillium*, comprising modifying a *creA* gene of said koji mold such that ~~the ability of the gene product thereof~~ exhibits no binding affinity to DNA sequences that are responsible for blocking the transcription of a protease, thereby enhancing to inhibit the production of a the protease in the koji mold is decreased.

18. (Currently amended) A method for preparing a protein hydrolysate from hydrolyzing a proteinaceous material with a koji mold belonging to the genus *Aspergillus*, *Rhizopus*, *Mucor*, or *Penicillium*, comprising modifying a creA gene of said koji mold such that ~~the ability of the gene product thereof to inhibit~~ exhibits no binding affinity to DNA sequences that are responsible for blocking the transcription of a protease, thereby enhancing to inhibit the production of a the protease in the koji mold ~~is decreased~~; and contacting said proteinaceous material with said koji mold.

The following is an **Examiner's Statement of Reasons for Allowance**: The following references appear to be the closest art to the claimed invention. Dowzer *et al.* (Molecular and Cellular Biology 11, 5701-5709 (1992)) teach the complete nucleotide sequence of the creA gene of *Aspergillus nidulans*, and the creA gene encodes a DNA-binding repressor protein, where a disruption of the creA gene in the strain can be obtained. However, the reference does not teach or suggest a method for enhancing the proteolytic activity of a koji mold belonging to the genus *Aspergillus*, *Rhizopus*, *Mucor*, or *Penicillium*, comprising modifying a creA gene of said koji mold such that the gene product thereof exhibits no binding affinity to DNA sequences that are responsible for blocking the transcription of a protease. Therefore, the claims are allowable over the art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Bragdon can be reached at 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
09/936,367  
Art Unit: 1656

Page 5

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Min Kam, Ph. D.  
Primary Patent Examiner



CHIH-MIN KAM  
PRIMARY EXAMINER

CMK

January 18, 2008